

**WHAT IS CLAIMED IS:**

1. A method of detecting a data transmission comprising a known training sequence that has been received from a channel, comprising the steps of:  
selecting a detection parameter set from a table comprising a plurality of  
5 detection parameter sets, wherein the selection is based upon the known training sequence of the data transmission;  
configuring a receiver using the selected detection parameter set; and  
using the receiver configured with the selected detection parameter set to receive the data transmission.

10 2. The method according to claim 1, wherein the detection parameter set comprises a synchronization technique.

3. The method according to claim 2, wherein the synchronization technique is a maximum window value synchronization technique.

15 4. The method according to claim 2, wherein the synchronization technique is a center of gravity synchronization technique.

5. The method according to claim 1, wherein the detection parameter set comprises a channel model.

6. The method according to claim 5, wherein the channel model is a standard channel model.

20 7. The method according to claim 5, wherein the channel model is a channel model including a DC component.

8. The method according to claim 1, wherein the detection parameter set comprises an equalization technique.

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5            11.    The method according to claim 8, wherein the equalization  
technique is DFSE equalization.

12. The method according to claim 1, wherein the detection parameter set comprises a channel estimation technique.

14. The receiver according to claim 13, wherein the detection parameter set comprises a synchronization technique, and the synchronization unit is configured in accordance with the synchronization technique.

16. The receiver according to claim 14, wherein the synchronization technique is a center of gravity synchronization technique.

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24. The receiver according to claim 13, wherein the detection parameter set comprises a channel estimation technique.